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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,070	07/21/2003	Dale M. Pickelman	DKT02152 (BWA 0245 PA)	7632
53834	7590	01/11/2006	EXAMINER	
BORGWARNER INC. 3850 HAMLIN ROAD AUBURN HILLS, MI 48326-2872			BONCK, RODNEY H	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,070

Applicant(s)

PICKELMAN ET AL.

Examiner

Rodney H. Bonck

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-27 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/24/03 & 12/20/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The following is a first action on the merits of application Serial No.10/624,070, filed July 21, 2003.

Information Disclosure Statement

Receipt is acknowledged of the Information Disclosure Statements filed September 24, 2003 and December 20, 2004. The cited documents have been considered.

Drawings

The drawings are objected to because reference number **176** in Fig. 2B lacks a lead line.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-13, 19-21, 24, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Stevens et al.('202). The Stevens et al. device is a hydraulically controlled drive system and can be considered a fan drive system since the housing carries a fan 44 and/or since the shaft 12 drives a helicopter rotor. The device includes a housing assembly 32,34 containing a hydraulic fluid, an engaging circuit coupled with the housing assembly and comprising a first pitot tube 104 coupled with the housing and receiving at least a portion of the fluid. The engaging circuit engages the housing assembly to a fan shaft 12 in response to supply of hydraulic fluid from Pitot tube 104. The engaging circuit further includes a clutch plate assembly 70,72 coupled to the housing assembly 32,34 and the fan shaft 12 and a piston 92. A drum houses the clutch plates of the clutch plate assembly and the Pitot tube supplies apply pressure to

the piston to engage the clutch plate assembly. In Stevens et al. a return assembly is provided at 98. The valve arrangement at 125 provides the claimed fluid flow controller. Using the Stevens et al. device would inherently involve performing the steps called for in claim 24.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens et al.('202). Where it is desired that drive continue in spite of loss of hydraulic pressure, it would have been obvious to provide that the clutch default to an

engaged condition, the motivation being to maintain fan drive for cooling and to maintain drive power to the rotor.

Claims 4, 18, 25, and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens et al.('202) in view of Matson('986). The Stevens et al. device does not appear to show cooling fins on the housing assembly. Matson discloses a clutch assembly that includes a housing assembly enclosing the clutch. The housing assembly includes cooling fins 50,51. It would have been obvious to provide cooling fins on the housing assembly of Stevens et al., the motivation being to improve the dissipation of heat generated in the clutch assembly. Matson also teaches providing a pitot tube for providing lubrication pressure to the clutch assembly.

Claims 17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens et al.('202) in view of Spokas('393). The Stevens et al. device does not include a controller that provides a cooling signal. Spokas shows a hydraulically actuated fan clutch for engine cooling and includes a device 126 for providing a cooling signal to control fluid flow. It would have been obvious to use the Stevens et al. device as a cooling fan drive and to provide an arrangement for providing a cooling signal to control fluid flow in Steven et al., the motivation being to provide fan clutch engagement only when needed. Note that Spokas also teaches providing a pressure relief valve at 100.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stevens et al.('202) in view of Lutz('020). The Stevens et al. device does not provide a temperature sensitive device preventing flow in the Pitot tube. Lutz, however, discloses a clutch engaged by fluid from Pitot tube 6. A valve 10 can prevent flow in the Pitot tube in response to temperature. It would have been obvious to provide a valve in the pitot tube of Stevens et al. to prevent flow in response to temperature, the motivation being to provide clutch engagement only when needed.

Allowable Subject Matter

Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Briski('830) and Cummings('622) are cited for their showing of fan drive clutch control valves. Shadday et al.('879) is cited to show Pitot tube 114. Isanhart('457) shows pressure relief valve 52. Duminy('594) shows a Pitot tube 39 providing actuation pressure to clutch piston 26 (Fig. 4).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney H. Bonck whose telephone number is (571) 272-7089. The examiner can normally be reached on Monday-Friday 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Rodney H. Bonck
Primary Examiner
Art Unit 3681

rhb
January 6, 2006